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**DOCKET NO. D-1969-055 CP-4**

**DELAWARE RIVER BASIN COMMISSION**

**Western Berks Water Authority  
Surface Water Withdrawal and Flood Hazard Area Special Permit  
Lower Heidelberg Township, Berks County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an application submitted by the Western Berks Water Authority (WBWA) to the Delaware River Basin Commission (DRBC or “Commission”) on November 13, 2012 and revised on November 8, 2016 for renewal of an allocation of surface water and review of a surface water withdrawal project (“Application”). The following additional Federal and State permits are required for the project and have either been issued or are pending as indicated below:

<b>PERMIT TYPE/NUMBER</b>	<b>ISSUANCE DATE</b>
Pennsylvania Department of Environmental Protection (PADEP) Water Allocation Permit No. WA 06-643B	11/18/2016
PADEP Water Obstruction and Encroachment Permit No. E06-711	6/16/2017
NPDES Permit Authorization for General NPDES Permit for Stormwater Discharges Associated with Construction Activities (PAC060001) PAG02 0006 14 031 BCCD ID# ESP-00070	11/8/2016
PADEP Public Water Supply Construction Permit	pending
USACE Section 408 Permit	pending
USACE Section 404 Joint Permit	Pending

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Berks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on November 15, 2017.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this docket is to renew the approval of an existing surface water withdrawal of up to 186 million gallons per month (mgm) based on an average of 6.0 million gallons per day (mgd) to supply the applicant's water supply system from a proposed 24-inch diameter water transmission pipeline to be connected to Blue Marsh Dam and an existing intake on Tulpehocken Creek. The water transmission pipeline will extend approximately 3,900 feet to the existing 8 mgd WBWA Water Treatment Plant (WTP). The docket also constitutes a special

use permit in accordance with Section 6.3.4 of the Commission's Flood Plain Regulations (18 CFR 415.33).

**2. Location.** The surface water withdrawal project is located in the Tulpehocken Creek Watershed in Lower Heidelberg Township, Berks County, Pennsylvania. Tulpehocken Creek in the area of the project is designated by the PADEP as supporting Cold Water Fishes (CWF).

Specific location information has been withheld for security reasons.

**3. Area Served.** WBWA operates as a bulk water supplier. WBWA's water supply system was constructed in the early 1970s and began supplying water in August of 1974. Currently, WBWA supplies water to the Borough of Shillington (which in turn serves the Borough of Mohnton and Cumru and Spring Townships), the Boroughs of West Reading and Wyomissing, a portion of Bern Township, and Wernersville Municipal Authority. There are several interconnections for these bulk purchasing public water suppliers and emergency interconnections with Pennsylvania America Water Company and the Reading Area Water Authority. The service area is outlined on a map entitled "DRBC Water Allocation Exhibit 'C'" submitted with the Application. For the purpose of defining Area Served, the Application is incorporated herein by reference, to the extent consistent with conditions contained in the DECISION section of this docket.

**4. Physical features.**

**a. Design criteria.** At the time of the Application and issuance of this docket, water is released to Tulpehocken Creek at the Commission's direction from a water supply pool controlled by DRBC in the United States Army Corps of Engineers (USACE) Blue Marsh Dam and Reservoir (also referred to as "Blue Marsh Lake"). WBWA withdraws water from the Creek at a downstream location adjacent to its WTP. A gate valve and associated 48-inch diameter conduit through the dam were constructed approximately forty years ago by USACE, for the purpose of providing WBWA with the ability to withdraw water directly from the Reservoir at an unspecified future date. A water transmission pipeline to convey water from the dam to the WTP was never constructed. A direct water supply connection to Blue Marsh Dam will provide a more reliable and higher quality water supply than the current withdrawal from Tulpehocken Creek, because stop logs in the dam can be used to divert water directly from Blue Marsh Lake at elevations where significantly higher quality is observed. As such, a water transmission pipeline is now proposed to be constructed and connected to the existing conduit installed in the dam. The conduit runs below grade on USACE property below the breast of the dam. The gate valve stem that allows water to be directed to the 48-inch diameter conduit through the dam was damaged during testing prior to 2006 but has been fully repaired.

WBWA currently serves water to customers on two (2) domestic service connections and bulk sales interconnections with the Borough of Shillington (which in turn serves the Borough of Mohnton and Cumru and Spring Townships), the Boroughs of West Reading and Wyomissing, a portion of Bern Township, and Wernersville Municipal Authority and records an existing average and maximum water demand of 3.159 mgd and 4.070 mgd, respectively. Peak day withdrawals in the past ten years have been as high as 5.840 million gallons. WBWA projects the 10-year

average and maximum water demand to increase to 3.487 mgd and 4.103 mgd, respectively. The allocation of 186 mgm (an average of 6.0 mgd) should be sufficient to meet the future demands of WBWA.

**b. Facilities.** WBWA's existing system consists of an 8.0 mgd WTP, transmission mains, finished water storage facilities, booster pumping stations and interconnections with meters and pressure-regulating valve stations. The existing and proposed surface water withdrawal intakes have the following characteristics:

INTAKE	WITHDRAWAL WATER BODY	WITHDRAWAL CAPACITY	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Tulpehocken Creek	Tulpehocken Creek	5,555 gallons per minute	31.3	1974
Blue Marsh Dam/ Transmission line	Blue Marsh Reservoir	Gravity fed 6.0 mgd	31.3	to be determined

**Water Supply Transmission Line** – The proposed water transmission pipeline between WBWA's WTP and Blue Marsh Dam will be a 24-inch diameter pipe connected to the existing 48-inch diameter conduit through the dam approximately 120 feet downstream from the dam toe. The pipe will run approximately 3,900 feet southeast along the southwestern bank of Tulpehocken Creek over USACE property. Pipeline construction will entail excavation of a four (4) foot wide pipe trench, installation of the pipe on bedding in the trench, and then backfilling with compacted backfill. Trench depths will range from approximately eight (8) feet to 16 feet. Water withdrawn from the reservoir will be transmitted to the WBWA WTP by gravity flow through the proposed 24" diameter water transmission main. It is estimated that the pipe will transmit a maximum flow of 6.0 mgd from a reservoir pool elevation of between 285 ft. and 290 ft. The pipe will have the capacity to carry the requested 6.0 mgd under these conditions.

The following is a list of operable features to be located on USACE property as part of the project:

- One (1) hydrant
- One (1) access chamber
- Three (3) access chambers with air/vacuum release valves
- One (1) access chamber with 12-inch flushing outfall
- One (1) flow meter manhole (to be maintained by WBWA for use by USACE to independently monitor raw water withdrawals from the lake)
- One (1) buried 24-inch gate valve with valve box
- One (1) connection of 24-inch pipe to 48-inch pipe

All chamber and manhole lids will have specialized security-fastened lids.

**Water Treatment Plant** – WBWA operates an 8.0 mgd WTP on the southwestern bank of Tulpehocken Creek, approximately 0.75 miles downstream of the Blue Marsh Dam. The water withdrawn from Tulpehocken Creek is treated by pre-treatment, coagulation, dissolved air flotation, filtration, and post-disinfection before it enters the distribution system. Withdrawals directly from Blue Marsh Dam will undergo the same treatment. With direct withdrawals from the dam, raw water quality is expected to improve, which will reduce the amount of chemicals required in the treatment process, thereby reducing treatment costs.

Intermittent supernatant overflow and backwash discharges are directed to Tulpehocken Creek. The most recent NPDES Permit for this treatment facility is No. PA0051560, issued by PADEP on August 10, 2016 with an effective date of September 1, 2016. Effluent limitations for outfalls 001 and 002 were determined using effluent discharge rates of 0.27 mgd and 0.028 mgd. The flow of 0.27 mgd for outfall 001 represents the 95<sup>th</sup> percentile of daily maximum flows when discharging. The average daily flow for outfall 001 is much lower, and the discharge is intermittent (estimated at 0.008 mgd). The discharge at outfall 002 would only occur in an emergency situation.

The Tulpehocken Creek withdrawal is metered. The withdrawal from Blue Marsh Dam will also be similarly metered.

All water service connections are metered.

c. **Other.** Wastewater generated within areas to which WBWA serves water is conveyed to the following sewage treatment facilities:

Owner Name	NPDES Permit No.	DRBC Docket No.	Hydraulic Design Capacity
Joint Municipal Authority of Wyomissing Valley	PA0026638	D-1991-009 CP-5	4.0 MGD
Robeson-Wernersville Municipal Authority	PA0031062	D-1988-023 CP-2	1.4 MGD
City of Reading	PA0026549	D-1986-028 CP-3	27.8 MGD
Reading Regional Airport	PA0028720	D-1986-038 CP-3	0.4 MGD
Spring Township	PA0043052	D-1988-077 CP-3	2.28 MGD
Sinking Spring	PA0020649	D-1994-031 CP-3	1.25 MGD
County of Berks	PA0033995	D-1990-036 CP	1.0 MGD

d. **Cost.** The overall cost of this project is estimated to be \$2,850,000.

e. **Relationship to the Comprehensive Plan.** The project was previously included in the Comprehensive Plan by Dockets Nos. D-1969-055 CP and D-1969-055 CP (3.8), approved on August 27, 1969 and December 15, 1971, respectively. Issuance of Docket No. D-1969-055 CP-4 will continue the inclusion of the project, as amended, in the Comprehensive Plan.

## **B. FINDINGS**

### **Project Background**

The Delaware River Basin Commission (DRBC) entered into a contract in 1971 with the USACE for the storage of water in Blue Marsh Reservoir located on Tulpehocken Creek for municipal and industrial water supply. Shortly thereafter, the DRBC entered into a contract with WBWA by which the Commission agreed to sell WBWA a supply of water from Blue Marsh Reservoir or Tulpehocken Creek or both, subject to water availability. As constructed in 1978-1979, Blue Marsh Dam included a dam outlet structure with a 48-inch diameter conduit running through the Dam to a point approximately 120 feet downstream from the dam toe. The original design was to include a raw water pipe that would connect the conduit to the WBWA WTP. The transmission line was never constructed, however, and WBWA has continued to withdraw water from its existing intake on Tulpehocken Creek.

On November 13, 2012, at the request of the DRBC, WBWA submitted to the Commission a Surface Water Withdrawal Application to update Docket No. D-1969-055 CP (3.8), which had no expiration date. In the view of DRBC, a docket update was required because the Commission's water supply contract with WBWA, executed on December 22, 1971 ("Contract"), was due to expire on December 22, 2011, and Docket No. D-1969-055 CP (3.8) did not contain a water allocation. By DRBC Resolution No. 2011-13 adopted on December 8, 2011, the Contract was extended for a period of one year, through December 22, 2012. As a result of ongoing water quality issues associated with its withdrawals from Tulpehocken Creek, WBWA determined that it would pursue the construction of the water transmission pipeline to connect the WBWA WTP directly to Blue Marsh Dam as was anticipated at the time of the dam's construction. The Contract was allowed to expire, and no new docket was immediately issued. However, DRBC and WBWA continued to honor the terms of their Contract: WBWA continued to operate under its existing docket, and the DRBC continued to order water supply releases from Blue Marsh Dam while engineering design and permitting aspects of the water line project were developed. The new intake will become the primary water source to the WTP, with the existing intake on Tulpehocken Creek to be used as the alternative water source.

### **Floodplain Regulations**

Section 6.3.4 of the Commission's Floodplain Regulations allows certain uses, including pipelines constructed within the flood hazard area, only when authorized by special permit. The proposed water transmission pipeline will be constructed on the southwestern bank of Tulpehocken Creek within and adjacent to the FEMA-mapped 100-year floodplain. Approximately 1,400 feet of the pipeline will be located within and beneath the 100-year floodplain, predominantly in the area downstream of the dam and across the toe of the emergency spillway. The project will not require in-stream construction activities. The Project will not permanently alter, modify, or obstruct any watercourses. During construction of the pipeline,

equipment will be temporarily located in the flood hazard area. However, construction within the flood hazard area will be expedited and the equipment will be removed when pipeline construction is complete.

A joint permit application has been submitted to USACE and PADEP for aspects of work within the floodway for the reach of Tulpehocken Creek immediately downstream of the Blue Marsh Dam. The project will create no changes in inflow and will not change water surface profiles at any time. Because the project is not located within the waterway, and because proper and approved erosion and sedimentation control measures will be utilized, no sediment impacts to Tulpehocken Creek are expected. Because the project will involve no construction fill above existing land elevations within the floodplain and floodway – only construction cuts that will be backfilled – the project will not exacerbate flooding.

No permanent aboveground facilities are proposed within the flood hazard area. All of the pipeline facilities will be underground, with locked and gasket-sealed chambers and manholes. Following the construction of the pipeline, the land surface will be restored to preconstruction conditions. No construction spoil or fill material will remain in the floodway. Grass and ground cover vegetation will be fully restored along the temporary and long-term rights-of-way. This docket constitutes a special use permit in accordance with Section 6.3.4 of the Commission's Flood Plain Regulations for a pipeline within the flood hazard area.

#### **Blue Marsh Dam and Reservoir Water Supply Interim Operations Plan**

By letter dated June 9, 2016 the DRBC provided to the USACE an interim operations plan to provide for continued water supply releases to Tulpehocken Creek from the DRBC's water supply pool in Blue Marsh Lake. Currently, the minimum release schedule detailed in Table 7-1 of the USACE Philadelphia District (CENAP) Water Control Manual (WCM) for Blue Marsh Lake reduces water supply releases from the dam for WBWA to 0 cubic feet per second (cfs) after the proposed WBWA water transmission pipeline and connection (referred to in the WCM as the Direct Water Supply Withdrawal System) becomes operational. However, the DRBC may direct releases from its water supply pool (WSP) in Blue Marsh Reservoir at its discretion, provided that the water is available. Accordingly, the DRBC intends to have CENAP continue to make releases to Tulpehocken Creek from the DRBC's pool in an amount equal to 9 cfs minus the metered amount of WBWA's withdrawals of the previous day.

From 2003 through 2012 WBWA's average daily water withdrawal from Tulpehocken Creek was approximately 5.2 cfs. Following construction of the pipeline, releases from Blue Marsh Reservoir to Tulpehocken Creek will consist of approximately 3.8 cfs from DRBC's WSP (9 cfs minus WBWA's withdrawal), plus any additional conservation release from the Water Quality Pool (WQP), plus any other releases from the WSP directed by the Commission or any other releases from the WQP. When the new pipeline becomes operational, the WCM Table 7-1 Minimum Release Schedule should be replaced with the following modified schedule:

Minimum Release Schedule (Required Release)				
Year or Event	Flows to be Maintained at Key Stations			
	Tulpehocken Creek at Blue Marsh Dam Site			Tulpehocken Creek near Reading PA
	DRBC Water Supply Release <sup>(1)</sup> (cfs)	Conservation Release <sup>(2)</sup> (cfs)	Total (cfs)	Total (cfs)
I	Prior To Direct Water Supply Withdrawal from Project			
2016 - until otherwise directed by DRBC	9	41	50	47
II	Direct Water Supply Withdrawal System (When Operational)			
(a) While WBWA withdrawing from Direct Water Supply Withdrawal System	9 <i>minus</i> prior day metered withdrawal from WBWA	41	41 <i>plus</i> release from DRBC water supply pool	47
(b) While WBWA is withdrawing from Tulpehocken Creek	9	41	50	47

(1) Releases will be greater whenever the Delaware River Basin Commission requests additional releases of water for the Schuylkill River Basin and Delaware Estuary. (The Delaware River Basin Commission may request additional releases for low flow augmentation.)

(2) Conservation releases are from the WQP.

Pending formal modification of the WCM to align with the above, the modified schedule should be utilized for operation of the reservoir. As indicated in the modified schedule at II(b), if for whatever reason no withdrawal is occurring from the direct connection to the reservoir and WBWA is withdrawing directly from Tulpehocken Creek, 9 cfs will be released from the Commission's WSP. WBWA must notify USACE in advance if possible, and immediately when advance notification is not possible, that it will withdraw from Tulpehocken Creek in lieu of taking water directly from the Lake via the proposed water transmission pipeline (*see* Condition C.II.e.).

### Water Audits for Public Water Supply Systems Serving Greater than 100,000 gpd

Section 2.1.8 of the Water Code states that it is the policy of the Commission to establish a standardized water audit methodology for owners of water supply systems serving the public to ensure accountability in the management of water resources. Voluntary water audits were encouraged for public water supply systems through December 31, 2011 (Water Code, Sec. 2.1.8 B.). Effective January 1, 2012, the owners of each public water supply system are required to implement an annual calendar-year water audit program conforming to IWA/AWWA Water Audit

Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding AWWA guidance (*see* Water Code, Sec. 2.1.8 C). Since the docket holder is a bulk water supplier to the Borough of Shillington (which in turn serves the Borough of Mohnton and Cumru and Spring Townships), the Boroughs of West Reading and Wyomissing, a portion of Bern Township, and Wernersville Municipal Authority, it shall request water audits from those customers who are public water suppliers and who are not currently providing water audits to the Commission. The docket holder's annual water audit submittal shall consist of the individual water audits from those customers who are public water suppliers and who are not currently providing water audits to the Commission. Water audits must be submitted annually to the Commission by March 31 (*see* Condition C.II.1.)

### **Drought Management and Contingency Plans (DMCPs) for Water Withdrawals greater than 1 mgd**

The Commission's *Rules of Practice and Procedure (RPP)* require municipal, public authority, private water works, industrial and commercial water withdrawers of in excess of one million gallons per day to develop a contingency plan, including emergency conservation measures, to be instituted in the event of a Commission-declared drought or other water shortage. *See* 18 CFR 401.36. Such plans are known as drought management contingency plans (DMCPs). The Commission's *Water Code* (Section 2.1.4) establishes the conservation goal of a 15 percent reduction in depletive use during drought conditions. A DMCP must include: source of water supply; the average daily and monthly peak water withdrawal; average daily and peak monthly consumptive use (difference between quantity withdrawn and quantity returned to the ground or surface waters of the basin); description of recycling and conservation measures; point of discharge (where water is returned or discharged); types of products produced; normal employment levels (numbers); and estimated employment (numbers) and economic impact for curtailment of water usage for the following levels of curtailment: 10%; 25%; 35%; 50% and 100%. The DMCP shall include all use in the docket holder's area served including the Borough of Shillington (which in turn serves the Borough of Mohnton and Cumru and Spring Townships), the Boroughs of West Reading and Wyomissing, a portion of Bern Township, and Wernersville Municipal Authority. The DMCP must be submitted to the Commission within 6 months of the docket approval date (by May 15, 2018). The Executive Director will review the DMCP and either require modifications or provide approval in writing if the DMCP is found to be in accordance with the Commission requirements. Condition C.II.o. of this docket provides that the docket holder must implement the DMCP if it is directed to do so by the Executive Director due to drought or other emergency.

### **Surface Water Charges and Consumptive Use**

The docket holder is subject to a fee for all surface water withdrawals in accordance with the *Basin Regulations – Water Supply Charges*, 18 CFR Part 420, as set forth in Condition C.II.h. of this docket. The DRBC estimates that project withdrawals used for the purpose of public water supply result in a consumptive use of 10 percent of the total water withdrawal. "Consumptive use" is defined in the Water Supply Charges regulations at 18 CFR 4201.1(d).



**Easement and Sub-easement**

The installation and operation of the proposed pipeline on USACE property may proceed only upon issuance of (1) a temporary and permanent easement by the Secretary of the Army to the DRBC and (2) a temporary and permanent sub-easement over the USACE property by DRBC to WBWA. The sub-easement will provide for WBWA to perform routine maintenance and inspections of the water transmission pipeline when completed. To the extent this docket approval authorizes the construction and operation by WBWA of facilities located on USACE property, it is contingent upon issuance of the described easements.

**Reimbursement of Costs**

Because the water provided to WBWA is made available through DRBC's water supply agreement with USACE, the USACE will invoice DRBC for all costs incurred by it related to review and inspection of the WBWA pipeline construction and for operation and maintenance of the Direct Water Supply Withdrawal System inside the dam. Accordingly, DRBC's docket approval is subject to the assurance that WBWA will remit to DRBC all such amounts invoiced by USACE. Such assurance shall be deemed sufficient upon execution by WBWA and DRBC of a separate agreement for reimbursement of USACE costs invoiced to DRBC, in accordance with Condition C.II.r. of this docket.

**Consumptive Water Use Replacement for Electric Generating and Cogenerating**

Water withdrawn directly or indirectly from DRBC's pool in Blue Marsh Lake (i.e., whether via the Direct Water Supply Withdrawal System or from Tulpehocken Creek) – may not be used by electric generating or co-generating facilities as a source of consumptive use replacement water during a critical hydrologic condition as defined by the Commission. (See Condition C.II. e.e.).

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

**C. DECISION**

I. Effective on the date of approval of Docket No. D-1969-055 CP-4 as set forth below:

a. The projects described in Dockets Nos. D-1969-055 CP and D-1969-055 CP (3.8) are removed from the Comprehensive Plan to the extent that they are not included in this Docket No. D-1969-055 CP-4; and

b. Docket Nos. D-1969-055 CP and D-1969-055 CP (3.8) are terminated and replaced by Docket No. D-1969-055 CP-4.

c. The project and the appurtenant facilities described in the Section A “Physical features” shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP and USACE. The docket holder shall register with and report to the PADEP all surface and ground water sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

b. Surface water withdrawals and operational records shall be available at all times for inspection upon request by the DRBC.

c. Surface water withdrawals shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any month, the combined withdrawal from all sources shall not exceed 186 million gallons. No source shall be pumped above monthly allocation set forth below:

<b>WITHDRAWAL SOURCE</b>	<b>AVERAGE DAILY RATE</b>	<b>MONTHLY ALLOCATION</b>
Blue Marsh Reservoir	6.0 mgd	186 mgm
Tulpehocken Creek	6.0 mgd	186 mgm

e. Once the water transmission pipeline is operational, WBWA shall notify USACE promptly when it has determined that it will withdraw from Tulpehocken Creek in lieu of taking water directly from Blue Marsh Lake through the pipeline.

f. The docket holder shall pay for its surface water use in accordance with DRBC’s *Basin Regulations – Water Supply Charges*, 18 CFR Part 420.

g. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement shall (a) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; and (b) indicate the date on which the project was (or is to be) placed into operation.

h. The approval of construction related to the water transmission pipeline described in paragraph A.4.a of this docket shall expire three years from the date set forth below unless prior thereto the docket holder has commenced operation of the subject project or has provided the Executive Director with written notification that it has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

i. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported monthly to PADEP and shall be available to the Commission at any time if requested by the Executive Director.

j. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).

k. In accordance with Section 2.1.6 of the *Delaware River Basin Water Code* (adopted by Resolution No. 87-6 Revised and amended by Resolution No. 2009-1), the docket holder shall continue to implement to the satisfaction of the PADEP a systematic program to monitor and control leakage within the water supply system. The program shall at a minimum include: periodic surveys to monitor leakage, enumerate non-revenue water and determine the current status of system infrastructure; recommendations to monitor and control leakage; and a schedule for the implementation of such recommendations. The docket holder shall proceed expeditiously to correct leakages and unnecessary usage identified by the program.

l. In accordance with Section 2.1.8 of the *Delaware River Basin Water Code* (adopted by DRBC Resolution No. 2009-1), the docket holder shall implement an annual calendar year water audit program conforming to IWA/AWWA Water Audit Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding guidance. Since the docket holder is a bulk water supplier to the Borough of Shillington (which in turn serves the Borough of Mohnton and Cumru and Spring Townships), the Boroughs of West Reading and Wyomissing, a portion of Bern Township, and Wernersville Municipal Authority, it shall request water audits from those customers who are public water suppliers and who are not currently providing water audits to the Commission. The docket holder's annual water audit submittal shall consist of the individual water audits from those customers who are public water suppliers and who are not currently providing water audits to the Commission. Water audits shall be submitted annually to the Commission by March 31.

m. The docket holder shall implement to the satisfaction of the PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

n. The docket holder shall continue to implement its Water Conservation Plan as approved by PADEP, and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

o. The docket holder shall prepare and submit to the Commission within 6 months of the date of this docket approval, a DMCP, the elements of which are set forth at section B hereof (see page 8). The Executive Director shall review the DMCP and either require modifications or provide approval in writing if the DMCP is found to be in accordance with the

Commission requirements. The docket holder shall implement the DMCP if it is directed to do so by the Executive Director due to a drought or other emergency.

p. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

q. To the extent this docket approval authorizes the construction and operation by WBWA of facilities located on USACE property, it is contingent upon issuance of (1) a temporary and permanent easement by the Secretary of the Army to the DRBC and (2) a temporary and permanent sub-easement over the USACE property by DRBC to WBWA. The sub-easement will provide for WBWA to construct the water transmission pipeline and perform routine maintenance and inspections of the pipeline when completed.

r. WBWA will be invoiced by DRBC for all costs associated with USACE review and inspection of the water transmission pipeline and for operation and maintenance of Direct Water Supply Withdrawal System components inside of Blue Marsh Dam. This docket approval is subject to the assurance by WBWA that it will remit to DRBC all such amounts invoiced by USACE. Such assurance shall be deemed sufficient upon execution by WBWA and DRBC of a separate agreement for reimbursement of USACE expenses related to the pipeline and other Direct Water Supply Withdrawal System components.

s. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

t. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

u. The docket holder is permitted to provide the water approved in this docket to the areas and customers included in Section A.3. Area Served of this docket. Any expansion beyond the areas included in Section A.3. is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

v. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date set forth below, the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

w. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC regulations (see 18 CFR 401.43).

x. This approval may be transferred from WBWA to another owner by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and accompanied by the appropriate fee as set forth at 18 CFR 401.43.

y. The docket holder shall request a name change if a change is made or proposed to the name of the entity to which this approval is issued. The request for name change shall be submitted on the appropriate form and accompanied by the appropriate fee as set forth at 18 CFR 401.43.

z. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder to insure the proper control, use and management of the water resources of the Basin.

aa. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

bb. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

cc. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

dd. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*, 18 CFR 401 Subpart F. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the Compact are reviewable in the United States district courts.

ee. Water withdrawn directly or indirectly from DRBC's pool in Blue Marsh Lake (i.e., whether via the Direct Water Supply Withdrawal System or from Tulpehocken Creek) – may not be used by electric generating or co-generating facilities as a source of consumptive use replacement water during a critical hydrologic condition as defined by the Commission.

**BY THE COMMISSION**

**APPROVAL DATE:**

**EXPIRATION DATE: December 17, 2027**